

1. An electric lamp assembly, comprising:

a stem assembly comprising a stem and first and second electrical conductors;

an electric lamp capsule comprising first and second lead wires, said first and second lead wires being electrically connected to said first and second electrical conductors, respectively;

a fuse electrically connected in series with one of said first and second lead wires; and

a retainer comprising first and second plates each having first and second ends, said stem being clamped between said first ends of said first and second plates and said capsule being clamped between said second ends of said first and second plates.

2. The electric lamp assembly of claim 1, wherein said first and second plates each comprise a rigid frame defining an opening in which said first and second electrical conductors, said first and second lead wires and said fuse are exposed.

3. The electric lamp assembly of claim 2, wherein each said rigid frame has first and second sides, said

first and second plates being attached to each other at said first and second sides.

4. The electric lamp assembly of claim 3, wherein one of said first and second sides of both of said first and second plates have a plurality of foldable tabs that secure said first and second plates to each other when said plural tabs are in a folded position.

5. The electric lamp assembly of claim 3, wherein said sides of said first plate are welded to said sides of said second plate.

6. The electric lamp assembly of claim 2, further comprising a shield connectable to said retainer for covering said opening.

7. The electric lamp assembly of claim 1, wherein said first and second plates are rectangular and said first and second ends have grooves in which said stem and said capsule are clamped.

8. The electric lamp assembly of claim 1, wherein said first and second plates are nickel-plated steel.

9. The electric lamp assembly of claim 1, wherein each of said first and second plates further comprises a pair of detents that snap into respective recesses in said stem and said capsule.

10. An electric lamp comprising:  
a light transmissive outer envelope with a lamp assembly therein, said lamp assembly comprising,

a stem assembly comprising a stem and first and second electrical conductors;

a single-ended electric lamp capsule comprising first and second lead wires, said first and second lead wires being electrically connected to said first and second electrical conductors, respectively;

a pyrophoric fuse electrically connected in series with one of said first and second lead wires;

a retainer mechanically connecting said stem assembly to said capsule, said retainer comprising first and second substantially identical rigid frames each having first and

second ends and first and second sides, said stem being clamped between respective said first ends and said capsule being clamped between respective said second ends, said frames having an opening therethrough in which said lead wires, said conductors, and said fuse are exposed.

11. The electric lamp of claim 10, wherein said first and second sides have a plurality of welds to connect said first and second frames to each other.

12. The electric lamp of claim 10, wherein one of said first and second sides of both of said first and second frames further comprise a plurality of foldable tabs extending therefrom that secure said first and second pieces together when said plural tabs are in a folded position.

13. The electric lamp assembly of claim 10, wherein said rigid frames are generally rectangular and each further comprise a movable flange that is movable from a first position to a second position that is substantially perpendicular to said respective ones of said first and second sides.

14. The electric lamp of claim 10, wherein each of said first and second plates further comprises a pair of detents that snap into recesses in respective ones of said stem and said capsule.

15. The electric lamp of claim 10, wherein said retainer is electrically isolated from said leads, said conductors and said fuse.

16. The electric lamp of claim 10, wherein each said first and second frames is a one-piece frame.

17. The electric lamp assembly of claim 10, wherein said retainer is structured and arranged to hold said stem assembly and said capsule a fixed distance apart with respect to a longitudinal axis of said capsule.

18. The electric lamp assembly of claim 17, wherein said retainer is structured and arranged to center said stem assembly and said capsule along said longitudinal axis to prevent movement of said stem assembly and said capsule with respect to each other in a direction perpendicular to said longitudinal axis.

19. An electric lamp assembly, comprising:

a rigid chassis defined by two generally rectangular frames that are joined to each other along both sides of said chassis, said chassis having an opening therein;

a stem having two electrical conductors passing therethrough and into said opening, said stem being held between said two frames at one end of said chassis; and

a lamp having two leads extending from one end thereof and into said opening, said one end of said lamp being held between said two frames at a second end of said chassis opposite said one end, one of said two leads being connected to one of said two conductors through a fuse.

20. The lamp assembly of claim 19, wherein said two frames are substantially identical.

21. The lamp assembly of claim 19, wherein said two frames are plates that are shaped at said first and second ends to conform to said stem and said lamp.

22. The lamp assembly of claim 21, wherein said two frames are arched in cross section at said first and second ends.

23. The electric lamp assembly of claim 22, wherein said two frames are flat at said sides of said chassis.

24. The electric lamp assembly of claim 19,  
wherein said stem further comprises a neutral third wire between said two electrical conductors, another one of said wires being connected to another one of said two electrical conductors, and

wherein said fuse is clamped to said one electrical conductor and to said neutral third wire and said one wire is connected to the neutral third wire to create a complete electrical circuit through the fuse.

25. The electric lamp assembly of claim 24, wherein said fuse is coiled.

26. A method of manufacturing an electric lamp assembly comprising the steps of:

placing a first face of a stem assembly adjacent to one end of a first retainer plate;

placing a first face of a capsule adjacent to an opposite end of the first retainer plate;

placing a second retainer plate against a second face of the stem assembly and the capsule;

mechanically connecting said first and second retainer plates to each other;

electrically connecting first and second lead wires of said capsule to first and second electrical conductors of said stem assembly, respectively; and

connecting a fuse in series with one of said first and second lead wires.

27. The method as claimed in claim 26, wherein said step of mechanically connecting said first and second retainer plates comprises welding said first and second retainer plates to each other.

28. The method as claimed in claim 27, wherein said first and second retainer plates are only welded at sides of said first and second retainer plates.



29. The method as claimed in claim 26, wherein said step of mechanically connecting said first and second retainer plates comprises folding foldable tabs extending from a first side of each plate around a second side of an opposing one of said first and second plates.

30. The method as claimed in claim 29, wherein said foldable tabs number four for each plate.

31. The method of claim 26, further comprising the step of snapping a pair of detents of each of the first and second plates into a recess on a respective one of the stem assembly and the capsule.